

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-14 (Canceled).

Claim 15 (New): An evaporator of plate type having at least one inlet and at least one outlet allowing a medium to enter into and exit from said evaporator, said evaporator comprising:

a plurality of interconnected evaporation chambers disposed in parallel, having at least one common inlet and at least one common outlet allowing a medium to enter into and exit from said chambers;

an external loop configured to drain said medium from lower parts of said evaporation chambers and introduce said medium back into the evaporation chambers.

Claim 16 (New): An evaporator according to claim 15, wherein said inlet is connected to an expansion means by connection means, said expansion means including an additional inlet, and wherein said external loop is configured to introduce said medium back into the evaporation chambers through the additional inlet of said expansion means.

Claim 17 (New): An evaporator according to claim 15, wherein said inlet includes an additional inlet, and wherein said external loop is configured to introduce said medium back into the evaporation chambers through said additional inlet by an expansion driven injector.

Claim 18 (New): An evaporator according to claim 15, wherein said external loop comprises a pump.

Claim 19 (New): A heat exchanger, comprising an evaporator according claim 15.

Claim 20 (New): A heat exchanger of plate type comprising:

interacting alternating plates having a groove pattern forming at least first and second separate duct loop systems allowing a first medium to circulate in the first of said duct systems under heat exchange with a second medium circulating in the second of said duct systems, wherein said first duct loop system comprises a part forming a plurality of interconnected evaporation chambers having at least one common inlet and at least one common outlet allowing said first medium to enter into, and exit from, said chambers, wherein said evaporation chambers include an additional outlet connected to a drainage means for said first medium from said evaporation chambers' lower parts in an external loop and to introduce said first medium back into said evaporation chambers.

Claim 21 (New): A heat exchanger according to claim 20, wherein said interacting plates form a third duct system in which a third medium can circulate under heat exchange with at least said first medium.

Claim 22 (New): A heat exchanger according to claim 21, wherein said chambers include one delimited zone defined, and

the outlet of said chambers is connected, via a compressor, to a part of said first duct system forming a condenser chamber having a substantially vertical channel piloting said first medium from said chamber's lower parts up into another delimited defined zone, wherein said first medium can circulate in said two delimited zones under heat exchange with itself.

Claim 23 (New): A heat exchanger according to claim 22, further comprising:

a first duct chamber including an inlet and outlet allowing said second medium to enter said first duct chamber through said inlet to be piloted through said first duct chamber under heat exchange with said first medium, and to leave said first duct chamber through said outlet,

a plurality of interconnected evaporation chambers including a common inlet, a common outlet and one delimited zone, allowing said first medium to enter through said inlet to be piloted through said evaporation chambers under heat exchange with said second medium and further through said zone under heat exchange with itself, and to leave said evaporation chambers through an outlet,

a compressor and a condenser chamber including an inlet and an outlet, said condenser chamber further having another delimited zone and a substantially vertical channel leading to said other delimited zone from said condenser chamber's lower parts and said compressor being connected to said outlet and said inlet, allowing said first medium to be piloted from said outlet into said condenser chamber through said inlet via said compressor and further piloted through said condenser chamber under heat exchange with said third medium, and further piloted up through said channel into and through said other zone through which said first medium is allowed to be piloted under heat exchange with itself and thereafter to leave said condenser chamber through said outlet,

an expansion valve connected to said outlet and inlet allowing said first medium to be piloted from said condenser chamber into said evaporation chambers through said inlet via said expansion valve, and

a second duct chamber having an inlet and an outlet allowing said third medium to enter into said second duct chamber through said inlet and to be piloted through said duct

chamber under heat exchange with said first medium and allowing said third medium to leave said duct chamber through said outlet.

Claim 24 (New): A heat exchanger according to claim 20, wherein said drainage means is arranged to introduce said first medium back into the evaporation chambers through an external expansion means feeding said inlet with said first medium.

Claim 25 (New): A heat exchanger according to of claim 20, wherein said drainage means is arranged to introduce said first medium in an additional inlet by an expansion driven injector.

Claim 26 (New): A heat exchanger according to claim 20, wherein said drainage means comprises a pump.

Claim 27 (New): A heat pump system, comprising an evaporator according to claim 15.

Claim 28 (New): An air condition system, comprising an evaporator according to claim 15.